

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An integrated circuit including an electrical over stress shunt, comprising:

a voltage threshold detector to detect an electrical over stress event wherein a potential is measured between a higher potential power rail and a lower potential ground rail in excess of a predetermined voltage, said electrical over stress event occurring during a difference in an order in which connections are made between contacts of a powered device and contacts of an unpowered device as they are connected or disconnected; and

a switchable low resistance path between said power rail and said ground rail, said low resistance path being adapted to be switched ON for a duration of said electrical over stress event.

2. (original) The integrated circuit including an electrical over stress shunt according to claim 1, wherein:

said low resistance path is adapted to be switched ON for significantly longer than 2 microseconds.

3. (original) The integrated circuit including an electrical over stress shunt according to claim 2, wherein:

said low resistance path is adapted to be switched ON for longer than 1000 microseconds.

4. (original) The integrated circuit including an electrical over stress shunt according to claim 3, wherein:

said low resistance path is adapted to be switched ON for longer than 4000 microseconds.

5. (original) The integrated circuit including an electrical over stress shunt according to claim 1, further comprising:

a driver between said voltage threshold detector and said switchable low resistance path.

6. (original) The integrated circuit including an electrical over stress shunt according to claim 5, wherein:

said driver comprises a series connection of a plurality of inverters.

7. (original) The integrated circuit including an electrical over stress shunt according to claim 1, wherein said switchable low resistance path comprises:

a MOSFET transistor.

8. (original) The integrated circuit including an electrical over stress shunt according to claim 1, wherein:

said integrated circuit includes a Firewire IEEE 1394 interface.

9. (currently amended) In an integrated circuit, a power distribution system comprising:

a power rail;

a ground rail; and

an electrical over stress shunt connected between said power rail and said ground rail, said electrical over stress shunt being capable of causing a low resistance path to be turned on between said power rail and said ground rail for an entire duration of when a potential of said power rail becomes greater than a potential of said ground rail by more than a predetermined threshold during a difference in an order in which connections are made between contacts of a powered device and contacts of an unpowered device as they are connected or disconnected.

10. (original) In an integrated circuit according to claim 9, wherein:
said integrated circuit is based on 3.3 v technology.

11. (original) In an integrated circuit according to claim 9, wherein:
said predetermined threshold is at least 5 volts.

12. (original) In an integrated circuit according to claim 9, wherein:
said low resistance path is adapted to be switched ON for
significantly longer than 2 microseconds.

13. (original) In an integrated circuit according to claim 12,
wherein:
said low resistance path is adapted to be switched ON for longer
than 1000 microseconds.

14. (original) In an integrated circuit according to claim 9, wherein
said low resistance path comprises:
a MOSFET transistor.

15. (currently amended) A method of providing robustness to an
electrical circuit from an electrical over stress event, said method comprising:
detecting an EOS condition wherein a potential of a power rail of
said electrical circuit becomes greater than a potential of a ground rail of said
electrical circuit by more than a predetermined threshold, said EOS condition
occurring during a difference in an order in which connections are made between
contacts of a powered device and contacts of an unpowered device as they are
connected or disconnected; and
turning ON a low resistance path between said power rail and said
ground rail for a duration of an occurrence of said detected EOS condition.

16. (original) The method of providing robustness to an electrical circuit from an electrical over stress event according to claim 15, wherein:
said predetermined threshold is at least 5 volts.

17. (original) The method of providing robustness to an electrical circuit from an electrical over stress event according to claim 15, wherein:
said low resistance path is adapted to be switched ON for significantly longer than 2 microseconds.

18. (original) The method of providing robustness to an electrical circuit from an electrical over stress event according to claim 17, wherein:
said low resistance path is adapted to be switched ON for longer than 1000 microseconds.

19. (currently amended) Apparatus for providing robustness to an electrical circuit from an electrical over stress event, comprising:
a means for detecting an EOS condition wherein a potential of a power rail of said electrical circuit becomes greater than a potential of a ground rail of said electrical circuit by more than a predetermined threshold, said EOS condition occurring during a difference in an order in which connections are made between contacts of a powered device and contacts of an unpowered device as they are connected or disconnected; and
a means for turning ON a low resistance path between said power rail and said ground rail for a duration of an occurrence of said detected EOS condition.

20. (original) The apparatus for providing robustness to an electrical circuit from an electrical over stress event according to claim 19, wherein:
said predetermined threshold is at least 5 volts.

21. (original) The apparatus for providing robustness to an electrical circuit from an electrical over stress event according to claim 19, wherein:

said low resistance path is adapted to be switched ON for significantly longer than 2 microseconds.

22. (original) The apparatus for providing robustness to an electrical circuit from an electrical over stress event according to claim 21, wherein:

said low resistance path is adapted to be switched ON for longer than 1000 microseconds.

23. (currently amended) A circuit including an electrical over stress shunt, comprising:

a voltage threshold detector to detect an electrical over stress event ~~associated with contact with a cable~~ wherein a potential is measured between a higher potential power rail and a lower potential ground rail in excess of a predetermined voltage, said electrical over stress event occurring during a difference in an order in which connections are made between contacts of a powered device and contacts of an unpowered device as they are connected or disconnected; and

a switchable low resistance path between said power rail and said ground rail, said low resistance path being adapted to be switched ON for a duration of said electrical over stress event.

24. (original) The circuit including an electrical over stress shunt according to claim 23, wherein:

said low resistance path is adapted to be switched ON for longer than 1000 microseconds.

25. (original) The circuit including an electrical over stress shunt according to claim 23, further comprising:

a Firewire IEEE 1394 interface.

26. (new) The integrated circuit including an electrical over stress shunt according to claim 1, wherein:

one of said powered device and said unpowered device is a cable.

27. (new) In an integrated circuit according to claim 9, wherein:

one of said powered device and said unpowered device is a cable.

28. (new) The method of providing robustness to an electrical circuit from an electrical over stress event according to claim 15, wherein:

one of said powered device and said unpowered device is a cable.

29. (new) The apparatus for providing robustness to an electrical circuit from an electrical over stress event according to claim 19, wherein:

one of said powered device and said unpowered device is a cable.

30. (new) The circuit including an electrical over stress shunt according to claim 23, wherein:

one of said powered device and said unpowered device is a cable.

31. (new) The integrated circuit including an electrical over stress shunt according to claim 1, wherein:

one of said powered device and said unpowered device is a connector.

32. (new) In an integrated circuit according to claim 9, wherein:

one of said powered device and said unpowered device is a connector.

33. (new) The method of providing robustness to an electrical circuit from an electrical over stress event according to claim 15, wherein:

one of said powered device and said unpowered device is a connector.

34. (new) The apparatus for providing robustness to an electrical circuit from an electrical over stress event according to claim 19, wherein:

one of said powered device and said unpowered device is a connector.

35. (new) The circuit including an electrical over stress shunt according to claim 23, wherein:

one of said powered device and said unpowered device is a connector.